REMARKS

Claims 1-10 and 12-52 stand in the present application, claims 1, 12-16, 18, 19 and 35 having been amended, claim 11 having been canceled and new claims 49-52 having been added. Applicants note with appreciation the Examiner's indication of allowable subject matter in claims 12, 13, 29-34 and 44-48, but respectfully submit that in view of the above amendments and the following remarks that all of the claims standing in the application are now in condition for allowance.

Applicants wish to initially note that allowable claims 12 and 13 have been written in independent form and that claim 11 has been canceled. In addition, new claims 49-52 have been added to depend from claim 13, and correspond to prior claims 14-16 and 18, respectively, which were amended to depend from claim 12. Accordingly, claims 12-16, 18 and 49-52 are clearly believed to be in condition for allowance.

In the Office Action, the Examiner has rejected claims 1-11, 14-28 and 35-43 as either being anticipated under 35 U.S.C. § 102(a) by Hecht et al. or as being obvious under 35 U.S.C. § 103 over Hecht in view of either Yamashita et al. or Japanese Reference 7-286876 (hereinafter the '876 reference). In view of the above-described claim amendments, the Examiner's §§ 102 and 103 rejections of the claims are also believed to have been overcome, as will be described in greater detail below.

Applicants' invention is directed to a fluid flow amount measuring apparatus which is small-sized yet capable of high accuracy irrespective of fluid flow direction. The apparatus incorporates a flow amount detector which is disposed at only one of an upstream side and a downstream side of a heater with respect to one fluid flow direction. See present specification at page 3, line 24 through page 4, line 9. In order

to emphasize the above-described features of Applicants' invention, independent claims 1, 19 and 35 have been amended to more clearly recite that the flow detector is disposed at only one of an upstream side and a downstream side of the heater with respect to a direction of fluid flow. Since the cited references, taken singly or in combination, do not teach or suggest this key feature of Applicants' invention, independent claims 1, 19 and 35 and their respective dependent claims are believed to patentably define over the cited art.

More particularly, the Hecht device discloses two flow amount detectors 2, 3 provided at both upstream and downstream sides of a heater 1. This can clearly be seen in Figure 1 of the cited reference and the accompanying written description. Thus, Hecht teaches nothing more than what has been shown in the present application at Figures 5A and 5B with the attendant deficiencies of that arrangement described at the present specification at page 13, lines 1-11. Thus, Hecht does not teach or suggest disposing a flow detector at only one of an upstream side and a downstream side of a heater with respect to a direction of fluid flow as now more clearly recited in amended independent claims 1, 19 and 35.

Similarly to Hecht, Yamashita also discloses a device in which two flow amount detectors 5, 6 are provided at both upstream and downstream sides of a heater 4. This arrangement is also clearly shown in the cited reference at Figure 1 and the accompanying written description. Thus, Yamashita suffers from the same deficiencies as Hecht and therefore cannot have rendered obvious amended independent claims 1, 19 and 35 even if the reference was combined with Hecht.

Finally, the Examiner has relied upon the '876 reference for providing a flow amount detector downstream of the heater. Applicants disagree. In the '876 reference, a temperature-sensing resistor 31 which only determines flow direction is provided at only the downstream of a heater 30 with respect to the normal airflow direction A. This resistor 31, however, changes its resistance greatly when air flows in the reverse direction B, because it is cooled directly. Thus, the resistor 31 is capable of detecting airflow direction only. Conversely, the flow amount is detected based on a resistance of the heater 30. This is clearly stated in the English Abstract portion of the reference at the last line, which states "The direction of flow is detected from the change difference and the flow rate is detected by the resistance change of the heat-generation resistor 30." Thus, the '876 reference does not solve the deficiencies noted above with respect to Hecht, and accordingly, independent claims 1, 19 and 35 and their respective dependent claims patentably define thereover whether the references are taken singly or in combination.

Therefore, in view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all of claims 1-10 and 12-52, now standing in the application, be allowed and that the case be passed to issue. If there are any other issues remaining which the Examiner believes could be resolved through either a supplemental response or an Examiner's amendment, the Examiner is

respectfully requested to contact the undersigned at the local telephone exchange indicated below.

Respectfully submitted,

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